

**VOLUNTARY CLEANUP CONTRACT
15 - 4918 - RP**

**IN THE MATTER OF
3M GREENVILLE SITE, GREENVILLE COUNTY
and
3M COMPANY**

This Contract is entered into by the South Carolina Department of Health and Environmental Control and 3M Company, pursuant to the Brownfields/Voluntary Cleanup Program, S.C. Code Ann. §§ 44-56-710 through 760, as amended, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601 to 9675, as amended, and the South Carolina Hazardous Waste Management Act (HWMA), S.C. Code Ann. § 44-56-200, with respect to the facility known as the 3M Greenville Site ("Site"). The 3M Company property is located at 1400 Perimeter Road, Greenville, South Carolina ("Property"). The Property includes approximately 99.8413 acres and is bounded generally, within an approximately one-mile radius, by Nippon Carbide facility and commercial to light industry properties to the North; mixed light commercial properties on South Carolina Technology & Aviation Center property, undeveloped forest and Huff Creek as well as undeveloped fields and pasture south of Huff Creek to the South; a golf club and associated residential developments to the East; and Donaldson Center Airport followed by light industrial properties to the West. The Property is identified by the County of Greenville as Tax Map Serial Number 0400010101900 and 0400010101902; and a legal description of the Property is attached to this Contract as Appendix A.

DEFINITIONS

1. Unless otherwise expressly provided, terms used in this Contract shall have the meaning assigned to them in CERCLA, the HWMA, and in regulations promulgated under the foregoing statutes, or the Brownfields/Voluntary Cleanup Program
 - A. "3M" shall mean 3M Company. 3M is a Delaware corporation with its principal place of business located at 3M Center, St. Paul, Minnesota.

- B. "Contract" shall mean this Responsible Party Voluntary Cleanup Contract.
- C. "Pollutant" or "Contaminant" includes, but is not limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions, including malfunctions in reproduction, or physical deformations, in organisms or their offspring; "Contaminant" does not include petroleum, including crude oil or any fraction of crude oil, which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (i) through (vi) of Paragraph (D) of CERCLA § 101, 42 U.S.C. §§ 9601, as amended, and does not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality or mixtures of natural gas and such synthetic gas. The term "Contaminant" shall include pollutants.
- D. "Contamination" shall mean the presence of a Contaminant.
- E. "Department" shall mean the South Carolina Department of Health and Environmental Control or a successor agency of the State of South Carolina that has responsibility for and jurisdiction over the subject matter of this Contract.
- F. "Hazardous Substance" shall have the same meaning as defined under subparagraphs (A) through (F) of Paragraph (14) of CERCLA, Section 101, 42 U.S.C. Section 9601(14).
- G. "Property," as described in the legal description attached as Appendix A, shall mean that portion of the Site, which is subject to ownership, prospective ownership, or possessory or contractual interest of 3M.

- H. "Response Action" shall mean any assessment, cleanup, inspection, or closure of a site as necessary to remedy actual or potential damage to public health, public welfare, or the environment.
- I. "Site" shall mean all areas where a Hazardous Substance, Pollutant or Contaminant has been released, deposited, stored, disposed of, or placed, or otherwise comes to be located; "Site" does not include any consumer product in consumer use or any vessel, as defined in CERCLA.
- J. "Voluntary Cleanup" shall mean a response action taken under and in compliance with the Brownfields/Voluntary Cleanup Program, S.C. Code Ann. §§ 44-56-710 to 760, as amended.
- K. "Work Plan" shall mean the plan for additional Response Actions to be conducted at the Site as described in Paragraph 3 of this Contract.

FINDINGS

- 2. Based on the information known by or provided to the Department, the following findings are asserted for purposes of this Contract:
 - A. The 3M facility is located approximately seven miles south of the City of Greenville, South Carolina, immediately adjacent and north/west of the South Carolina Technology & Aviation Center (SCTAC), formerly referred to as the Donaldson Center Industrial Air Park. According to the records obtained from SCTAC, the 3M Property and adjacent properties were acquired by the War Department beginning in 1942 to establish what became the Donaldson Air Force Base (DAFB) in 1950. After World War II, the base was temporarily closed and later reopened as the Global Headquarters of the Military Air Transport Command. In 1964, base ownership was transferred to the City of Greenville and Greenville County, and managed by the Donaldson Development Commission (Commission).

- B. In 1971, Olin Corporation built and operated a polyester film plant on the Property currently owned by 3M. Olin Corporation reportedly leased the land from the Commission. 3M purchased the manufacturing plant from Olin Corporation in 1974 and continued to lease the Property from the Commission. In 1982, 3M acquired the approximate 100-acre property from the City of Greenville and Greenville County. 3M continues to manufacture polyester film and box sealing tape at the facility on the Property.
- C. In 1987 under the management of the U.S. Army Corps of Engineers (ACOE), the Department of Defense (DOD) initiated an investigation of DOD-installed underground storage tanks on the former DAFB. During the investigations, low levels of trichloroethylene (TCE) were detected in shallow groundwater from monitor wells located immediately south and down gradient of the 3M Property. DOD notified 3M in 1997 of the TCE contamination detected in shallow groundwater from monitor wells located immediately south and down gradient of the 3M Property.
- D. On June 3, 1998, 3M met with the Department to discuss the matter. The Department requested 3M to perform a groundwater investigation to characterize the nature and extent of TCE in shallow groundwater. 3M prepared a Groundwater Investigation Work Plan, which was submitted to the Department in July 1998. The plan was approved, and 3M completed the investigative activities at the Property in August 1998. The results of the investigation indicated a presence of TCE in shallow groundwater and defined the lateral extent as a narrow plume originating in the southern portion of the 3M Property and extending southward onto the adjacent property. Subsequent investigation further identified the source of the TCE near the west side of Building 24 and in the vicinity of the loading dock for Building 20 in February, 2000.

- E. Further investigation suggested that natural biodegradation was actively treating the groundwater contamination. 3M proposed a remedial response plan to the Department to enhance the natural degradation by injection of Hydrogen Release Compound (HRC) at the source and as a curtain along the down gradient Property boundary. The plan was approved by the Department in June 2000, and a UIC Permit was issued in September 2000. The HRC injection was conducted in November 2000.
- F. Subsequent groundwater monitoring suggested that although TCE degradation was indicated down gradient of the treatment curtain, no significant effects were observed within the source areas. The limited effect of HRC on the source was attributed to local geologic conditions. Since the plume was shown to be stable and no groundwater use receptors were identified down gradient of the Site, the Department agreed that additional HRC application was not warranted and the Site was entered into a groundwater monitoring program.
- G. Subsequent groundwater monitoring indicated that the volatile organic compounds (VOC) plume associated with the Property was stable but declining in concentration. As a result, in February 2006 the Department requested a re-evaluation of alternative remedial approaches for the groundwater VOC plume. At meetings held with the Department in April and June 2006, 3M proposed use of Emulsified Zero Valent Iron (EZVI) for source treatment due to the success of this treatment demonstrated at another 3M facility. Due to the stable conditions down gradient of the source and the absence of identified groundwater receptors, it was proposed to treat the onsite source areas with EZVI, allowing the down gradient plume to degrade through natural biodegradation. The Department approved the proposed remedial approach. Following investigation to better define the source areas, in December 2006 pursuant to

UIC Permit (#519M) issued by the Department, a total of 1,840 gallons of EZVI was injected into the shallow groundwater through 33 temporary injection points constructed within the identified TCE groundwater source areas.

- H. Prior to EZVI injection, baseline monitoring was performed at 6 selected wells within the area of proposed treatment to establish pre-injection contribution conditions. Groundwater samples were analyzed for VOCs and the treatment indicator parameters (total iron, total organic carbon (TOC), chloride, methane, ethane, and ethene).
- I. Following injections of EZVI in December 2006, performance monitoring was initiated approximately 14 days, 1 month, 2 months, and 3 months from the time of injection. Groundwater samples were collected from the selected monitor wells for VOC analysis, and analysis for the treatment indicator parameters (chloride, iron, methane, ethane, and ethene). As part of the 3-month sampling event, groundwater samples were also collected from 5 wells for VOC analysis.
- J. The baseline data and the initial EZVI performance monitoring data were presented to the Department in the Three-Month Status Report, dated May 25, 2007. As noted in the report, performance monitoring data confirmed that reductive dechlorination of TCE was occurring in and around the EZVI source treatment areas. By letter on May 31, 2007, the Department concurred with the findings and requested that performance monitoring be continued with the results reported to DHEC. 3M continues to conduct performance monitoring and reporting as agreed with the Department.
- K. 3M has submitted the following documents, exclusive of performance monitoring results, to the Department:
 - i. Groundwater Investigation Work Plan, July 1998
 - ii. Supplemental Groundwater Investigation Work Plan,

November 1998

- iii. Supplemental Groundwater Investigation Report, May 1999
- iv. Source Area Investigation Work Plan, August 1999
- v. Source Area Investigation Report, February 2000
- vi. Enhanced Bioremediation Plan, June 2000

RESPONSE ACTIONS

3. 3M agrees to submit to the Department for review and written approval within sixty (60) days of the execution date of this Contract a Work Plan to assess any areas of concern that have not been previously addressed on-site and the remaining off-Property investigation work to complete the Supplemental Remedial Investigation at the Site. The Work Plan shall be consistent with the technical intent of the National Contingency Plan. The Work Plan shall be implemented upon written approval from the Department. The parties to this Contract acknowledge that a substantial amount of investigation work and remediation work has been performed at this Site over the past 24 years. This past work may wholly or substantially satisfy some of the requirements for the Work Plan. Therefore, it is agreed that any response actions that have been completed and that meet the conditions of the Contract shall be deemed to satisfy the applicable elements of the Work Plan provided for in this Paragraph 3. The Work Plan shall include the names, addresses, and telephone numbers of the consulting firm, the analytical laboratory certified by the Department, and 3M's contact person for matters relating to this Contract. 3M will notify the Department in writing of changes in the contractor or laboratory. The Department will review the Work Plan and will notify 3M in writing of any deficiencies in the Work Plan, and 3M will respond in writing within forty-five (45) days to the Department's comments. The Work Plan and all associated reports shall be prepared in accordance with industry standards and endorsed by a Professional Engineer (P.E.) and/or Professional Geologist (P.G.) duly-licensed in South Carolina and shall set forth methods and schedules for accomplishing the following tasks:

- A. Complete a Remedial Investigation (RI) to address on-site and off-Property data gaps the Department has identified in its June 20,

2012, letter to 3M and which were discussed at the November 16, 2012 Site visit and the meeting on September 11, 2013.

- B. Submit to the Department a RI Report (to include a Baseline Risk Assessment for the off-Property area or other evaluation of risk to human health and the environment) in accordance with the schedule in the approved Supplemental RI Work Plan. The Department shall review the report for determination of completeness of the RI and sufficiency of the documentation. If the Department determines that the field investigation is not complete, it will send written notification of such to 3M, and 3M shall subsequently conduct additional field investigation to further determine the source, nature, and extent of contamination. If the Department determines that the field investigation is complete but the report is incomplete, the Department shall send to 3M a letter indicating that revision of the report is necessary. Within forty-five (45) days of receipt of such letter from the Department, 3M shall submit a revised report addressing the Department's comments.
- C. If determined necessary by the Department, conduct a Feasibility Study to evaluate remedial alternatives for addressing contamination at the Site.

4. 3M shall prepare and submit under separate cover from the Work Plan, a Health and Safety Plan that is consistent with Occupational Safety and Health Administration regulations. The Health and Safety Plan is submitted for information purposes only to the Department. The Department expressly disclaims any liability that may result from implementation of the Health and Safety Plan by 3M.

5. 3M shall inform the Department of field activities updating the schedule included in the Work Plan as the scope of work or schedule changes. If 3M plans to conduct field activities not included in the written project schedule, 3M shall inform the

Department in writing at least five (5) working days in advance of all field activities pursuant to this Contract and, if deemed necessary by the Department, shall allow the Department and its authorized representatives to take duplicates of any samples collected by 3M pursuant to this Contract.

6. Once every six (6) months after the execution date of this Contract, 3M shall submit to the Department a written progress report that must include the following: (A) actions taken under this Contract during the previous reporting period; (B) actions scheduled to be taken in the next reporting period; (C) sampling, test results, and any other data, in summary form, generated during the previous reporting period, pursuant to this Contract; and (D) a description of any environmental problems experienced at the Site with regard to performance under this Contract during the previous reporting period and the actions taken to resolve them.

7. All correspondence which may or are required or permitted to be given by either party to the other hereunder shall be in writing and deemed sufficiently given if sent by (A) regular U.S. mail, (B) certified or registered mail, postage prepaid, return receipt requested, (C) nationally recognized overnight delivery service company, or (D) by hand delivery to the other party at the address shown below or at such place or to such agent as the parties may from time to time designate in writing.

Unless otherwise directed in writing by either party, all correspondence, work plans, and reports should be submitted to:

The Department: Addie Walker
South Carolina Department Health & Environmental Control
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201
walkeras@dhec.sc.gov

3M: Attn: 3M Remediation Programs Manager
3M EHSO – Corporate Environmental Programs
3M Center, 224-5W-17
St. Paul, MN 55114-1000

All final work plans and reports shall include two (2) paper copies and one (1) electronic copy on compact disk.

PUBLIC PARTICIPATION

8. Upon execution of this Contract, the Department will seek public participation in accordance with S.C. Code Ann. § 44-56-740(D), and not inconsistent with the National Contingency Plan. 3M will reimburse the Department's cost associated with public participation (e.g., publication of public notice(s), building and equipment rental(s) for public meetings, etc.).

COSTS OF RESPONSE

9. 3M shall, within thirty (30) days of the execution date of this Contract, pay to the Department by certified or cashier's check the sum of four thousand six hundred six dollars and fifty-three cents (\$4,606.53) to reimburse estimated past response cost incurred by the Department through June 30, 2014 ("Past Costs") relating to the Site. 3M's payment for Past Costs should be submitted to:

The Department: John K. Cresswell
 South Carolina Department of Health & Environmental Control
 Bureau of Land and Waste Management
 2600 Bull Street
 Columbia, SC 29201

In accordance with §§ 44-56-200 and 44-56-740, 3M shall, on a quarterly basis, reimburse the Department for Oversight Costs of activities required under this Contract. Oversight Costs include, but are not limited to, the direct and indirect costs of negotiating the terms of this Contract, reviewing Work Plans and reports, supervising corresponding work and activities and costs associated with public participation. Payments will be due within thirty (30) days of the receipt of the Department's invoice. The Department shall provide documentation of its Oversight Costs in sufficient detail so as to show the personnel involved, amount of time spent on the project for each person, expenses, and other specific costs. Invoices shall be submitted to:

3M Company: Attn: 3M Remediation Programs Manager
3M EHSO – Corporate Environmental Programs
3M Center, 224-5W-17
St. Paul, MN 55114-1000

All of 3M's payments should reference the Contract number on page 1 of this Contract and be made payable to:

The South Carolina Department of Health & Environmental Control

If complete payment of the quarterly billing of Oversight Costs is not received by the Department by the due date, the Department may bring an action to recover the amount owed and all costs incurred by the Department in bringing the action including, but not limited to, attorney's fees, Department personnel costs, witness costs, court costs, and deposition costs.

ACCESS

10. The Department, its authorized officers, employees, representatives, and all other persons performing response actions will not be denied access to the Site during normal business hours or at any time work under this Contract is being performed or during any environmental emergency or imminent threat situation, as determined by the Department (or as allowed by applicable law) for the limited purpose of monitoring and evaluating the work performed in accordance with this Contract and ensuring compliance with this Contract. 3M and subsequent owners of the Property shall make reasonable efforts to ensure that a copy of this Contract is provided to any lessee or successor or other transferee of the Property. If 3M is unable to obtain access from the Site owner(s), the Department may obtain access for 3M to perform Response Actions. All of the Department's reasonable costs associated with access and said Response Actions will be reimbursed by 3M.

RESTRICTIVE COVENANT

11. If hazardous substances in excess of appropriate standards exist at the Property after 3M has completed the actions required under this Contract, 3M shall enter and file

a restrictive covenant upon the Property. Upon the Department's approval of the items outlined therein, the restrictive covenant shall be signed by the Department and representative(s) of 3M and witnessed, signed, and sealed by a notary public. 3M shall file this restrictive covenant with the Register of Mesne Conveyance of Deeds in the county in which the Property is located. The signed covenant shall be incorporated into this Contract as an Appendix. A Certificate of Completion shall not be issued by the Department until the restrictive covenant, if required, is executed and recorded. With the approval of the Department, the restrictive covenant may be modified in the future if additional remedial activities are carried out which meet appropriate clean-up standards at that time or circumstances change such that the restrictive covenant would no longer be applicable. The Department may require 3M or subsequent owners of the Property to modify the restrictive covenant if a significant change in law or circumstances requiring remediation occurs. 3M or subsequent owners of the Property shall file an annual report with the Department by May 31st of each year detailing the current land uses and compliance with the restrictive covenants for as long as the restrictive covenant remains in effect on the Property. The report must be submitted in a manner prescribed by the Department.

OBLIGATIONS AND BENEFITS

12. The terms, conditions, obligations, and benefits of this Contract inure to the benefit of 3M's signatories, parents, successors, assigns, and subsidiaries."

13. Nothing in this Contract is intended to be, or shall be construed as, a release or covenant not to sue for any claim or cause of action, past or future, that the Department may have against a responsible party who is not a signatory to the Contract.

14. Subject to Paragraph 16, nothing in the Contract is intended to limit the right of the Department to undertake future response actions at the Site or to seek to compel parties to perform or pay for costs of response actions at the Site. Nothing in this Contract shall in any way restrict or limit the nature or scope of response actions that

may be taken or be required by the Department in exercising its authority under State and Federal law.

15. Subject to Paragraph 16, nothing in this Contract is intended to be or shall be construed as a release or covenant not to sue for any claim or cause of action that the Department may have against 3M for any matters not expressly included in this Contract.

16. Upon successful completion of the terms of this Contract and the approved Work Plan as referenced in Paragraph 3 above, 3M shall submit to the Department a request for a Certificate of Completion.

Once the Department determines that 3M has successfully and completely complied with this Contract, the Department, pursuant to S.C. Code Ann. § 44-56-740(A)(5) and (B)(1), shall issue 3M a Certificate of Completion that provides a covenant not to sue 3M, its signatories, parents, successors, assigns, and subsidiaries, for the work done in completing the Response Actions specifically covered in the Contract and completed in accordance with the approved Work Plan and reports. The covenant not to sue is contingent upon the Department's determination that 3M successfully and completely complied with the Contract.

In consideration of the Department's covenant not to sue, 3M, its signatories, parents, successors and subsidiaries agree not to assert any claims or causes of action against the Department arising out of activities undertaken at the Site or to seek other costs, damages, or attorney's fees from the Department arising out of activities undertaken at the Site, except for those claims or causes of action resulting from the Department's intentional or grossly negligent acts or omissions.

17. 3M and the Department each reserve the right to unilaterally terminate this Contract. Termination may be accomplished by giving a thirty-(30)-day advance written notice of the election to terminate this Contract to the other party. Should 3M or subsequent owners of the Property elect to terminate, it must submit to the Department all data generated pursuant to this Contract, and certify to the Department's satisfaction

that any environmental or physical hazard shall be stabilized and/or mitigated such that the Site does not pose a hazard to human health or the environment that did not exist prior to any initial response action addressing contamination identified in this Contract.

18. The Department may terminate this Contract only for cause, which may include but is not limited to, the following:

- A. Events or circumstances at the Site that are inconsistent with the terms and conditions of this Contract;
- B. Failure to complete the terms of this Contract or the Work Plan;
- C. Failure to submit timely payments for Past Costs and/or for Oversight Costs as defined in Paragraph 9 above;
- D. Additional contamination or releases or consequences at the Site caused by 3M its parents, successors, assigns, and subsidiaries;
- E. Providing the Department with false or incomplete information or knowingly failing to disclose material information;
- F. Change in 3M's or its parents, successors, assigns, and subsidiaries business activities on the Property or use of the Property that are inconsistent with the terms and conditions of this Contract; or
- G. Failure by 3M to obtain the applicable permits from the Department for any response actions or other activities undertaken at the Property.

19. Upon termination of the Contract, the covenant not to sue will be null and void. Termination of this Contract by 3M or the Department does not end the obligations of 3M to pay Oversight Costs already incurred by the Department and payment of such costs shall become immediately due.

20. This Contract governs 3M's liability to the Department for administrative and civil sanctions arising from the matters set forth herein and constitutes the entire agreement between the Department and 3M with respect to this Contract. The parties are not relying upon any representations, promises, understandings or agreements except as expressly set forth in this Contract.

21. The signatories below hereby represent that they are authorized to and enter into this Contract on behalf of their respective parties.

**THE SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL**

BY: Daphne G. Neel
Daphne G. Neel, Chief
Bureau of Land and Waste Management
Environmental Quality Control

DATE: 5/18/15

Clair H. Price
Reviewed by Office of General Counsel

DATE: 5/13/15

3M COMPANY

J. R. Kotsmith
Signature

DATE: 5/11/15

James R. Kotsmith, Mgr. 3M Corp. Env. Programs
Printed Name and Title

APPENDIX A

Legal Description of the Property

County of Greenville

Tax Map Serial Numbers 0400010101900 and 0400010101902

All that piece, parcel or tract of land, situate, lying and being in the County of Greenville, State of South Carolina, located at Donaldson Center and comprising 100.62 acres, more or less, bounded on the north by other property of Donaldson Center, on the south by Perimeter Road and other property of Donaldson Center, on the east by Perimeter Road, and on the west by other property of Donaldson Center, including a taxiway, shown and designated as 100.62 acres on survey by Campbell and Clarkson Surveyors, Inc., SCRLS #2589, dated March 17, 1971, and being more particularly described with reference to said plat as follows:

(15)-145-400.1-1-19,1

BEGINNING at a point on the westerly side of Perimeter Road, being the northeasterly corner of the tract described herein, and running thence along the westerly side of Perimeter Road the following courses and distances: S. 17-09 E. 599.3 feet; S 21-55 E. 760.9 feet; S 23-17 E. 1,694.2 feet; thence continuing along the side of Perimeter Road as it turns in a westerly direction, S. 22-13 E. 100 feet; thence S. 9-18 E. 100 feet; thence S. 13-47 W. 100 feet; thence S. 32-05 W. 100 feet; thence S. 34-16 W. 875.85 feet to a point on the northwesterly side of Perimeter Road, being the southeasterly corner of tract described herein; thence turning and running N. 52-42 W., 1,434 feet to a point, being the southwesterly corner of tract described herein; thence turning and running N. 11-56 W. 1,842.75 feet to a point, being the northeasterly corner of the tract described herein; thence turning and running N. 78-04 E. 38 feet to a point; thence along the center line of the branch as the line with the following general courses and distances; N. 12-54 E. 304.6 feet to a point; N. 13-10 E. 108 feet to a point; N. 56-21 E 211 feet to a point; N. 62-11 E. 311 feet to a point; N. 72-18 E. 107 feet to a point; N. 40-13 E. 347 feet to a point; N. 0-17 E. 288.95 feet to the point of beginning.

The above-described property is subject to all rights-of-way and easements shown on said plat, and conditions, covenants, restrictions, etc., applicable to Donaldson Center property, recorded in the Office of the R.M.C. for Greenville County, S.C. on September 3, 1969 in Book 875 at Page 117.

This being a portion of the property conveyed to the City of Greenville and the County of Greenville by the United States of America by its deed dated January 24, 1964 and recorded in the R.M.C. Office for Greenville County in Volume 740 at page 573. The City of Greenville having conveyed its undivided one-half interest to the County of Greenville by deed dated May 17, 1971, and recorded in the R.M.C. Office for Greenville County in Volume 195 at page 570.

A recent calculation indicates that the above-described tract actually contains 99.8413 acres.

PIN / Tax Map #0400010101900 and #0400010101902